

DETAILED ACTION

1. Claim 1-35 are pending.

Election/Restrictions

2. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-5, 16-22 and 34-35, drawn to composition of matter.

Group II, claim(s) 6-15, drawn to an emulsion.

Group III, claim(s) 23-33, drawn to a composition being an emulsion.

3. Group I, II and III do not contain common special technical features. Claim 1 is not novel (See Laurent et al. (US 4824891)). The expression "special technical features" shall mean those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art. The prior art cited is evidence that the claimed inventions, considered as a whole, do not define a contribution over the prior art. Please see PCT Rule 13.2.
4. During a telephone conversation with YueZhong Feng on 02/18/2010 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-5, 16-22 and 34-35. Affirmation of this election must be made by applicant in replying to this Office action. Claims 6-15 and 23-33 have been withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

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5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Objections

6. Claim 1 is objected to because of the following informalities: Please change “comprising or including” to “comprising”. Appropriate correction is required.

7. Claims 16 and 34-35 are objected to because of the following informalities: Please change “including” to “comprising”. Appropriate correction is required.

8. Claims 1, 3 and 34-35 are objected to because of the following informalities: Please change “characterized by” to “wherein”. Appropriate correction is required.

9. Claim 5 is objected to because of the following informalities: Two periods at the end of claim. Appropriate correction is required.

10. Claims 2, 5, 17-18 and 34-35 are objected to because of the following informalities: A Markush-type claim recites alternatives in a format such as “selected from the group **consisting of** A, B **and** C.”, proper format is required if Applicants intended to claim under the Markush formula.

Claim Rejections - 35 USC § 112

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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12. Claims 16-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 16-22 recite the limitation "An emulsion" in line 1. There is insufficient antecedent basis for this limitation in the claim.

13. Regarding claim 18, the term "e.g." renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

14. Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 4 requires using surfactant in the emulsion; it is not an option to omit the surfactant in claim 19.

Claim Rejections - 35 USC § 102

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

16. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Clancy (US 3347702).

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Claim 1: Clancy discloses a composition comprising benzene (reads on continuous oil phase having high electrical volume resistivity), water and Triton X-400 (reads on electrically charged reagent) forming a water-in-oil emulsion (Example 3).

Claim 2: Zinc oxide (read on catalyst) is used in the composition of Example 3. Clancy also disclose incorporation of dye in the composition (column 5, line 74 through column 6, line 18).

17. Claims 3-5 and 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Clancy (US 3347702).

Claims 3 and 4: Clancy discloses a composition comprising benzene (reads on continuous oil phase having high electrical volume resistivity), water and Triton X-400 (reads on electrically charged surfactant) forming a water-in-oil emulsion (Example 3). The Triton X-400 is stearyl dimethyl benzyl ammonium chloride that has one part that is compatible with the benzene and one part that is compatible with water.

Claim 5: Zinc oxide (read on catalyst) is used in the composition of Example 3. Clancy also disclose incorporation of dye in the composition (column 5, line 74 through column 6, line 18).

Claims 20-22: Clancy disclose homogenization to produce particle size < 0.5 microns (column 8, lines 51-58).

18. Claims 35 is rejected under 35 U.S.C. 102(b) as being anticipated by Clancy (US 3347702).

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Clancy discloses a composition comprising benzene (reads on continuous oil phase having high electrical volume resistivity), water and Triton X-400 (reads on electrically charged surfactant) forming a water-in-oil emulsion (Example 3). The Triton X-400 is stearyl dimethyl benzyl ammonium chloride (read on reactant of acid and base) that has one part that is compatible with the benzene and one part that is compatible with water. Zinc oxide (read on catalyst) is used in the composition of Example 3. Clancy also disclose incorporation of dye in the composition (column 5, line 74 through column 6, line 18).

19. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Sertorio et al. (US 2828180, referenced as Sertorio hereafter).

Claim 1: Sertorio discloses a water-in-oil dyestuff emulsion comprising continuous phase naphtha (read on having high electrical volume resistivity), discontinuous water phase and electrically charged reagent sodium formaldehyde sulfoxylate (Example 20A).

Claim 2: See Example 20A.

20. Claims 3-5 and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Sertorio et al. (US 2828180).

Claim 3: Sertorio discloses a water-in-oil dyestuff emulsion comprising continuous phase naphtha (read on having high electrical volume resistivity), discontinuous water phase, electrically charged reagent sodium formaldehyde sulfoxylate and surfactant Permulsion FO, $\text{RO}[\text{CH}_2\text{CH}_2\text{O}]_{15}\text{CH}_2\text{CH}_2\text{OH}$, wherein R = mixed palmityl and stearyl (Example 20A). The non-ionic surfactant would not significantly reduce the volume resistivity of the continuous phase.

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Claim 4: The R substituent of the surfactant is compatible with the continuous phase and the ethylene oxide part is compatible with water.

Claim 5: Dye is used in the emulsion of Example 20A.

Claims 16-17: Ionic compound sodium formaldehyde sulfoxylate is used in the emulsion of Example 20A.

21. Claims 34 is rejected under 35 U.S.C. 102(b) as being anticipated by Sertorio et al. (US 2828180).

Sertorio discloses a water-in-oil dyestuff emulsion comprising continuous phase naphtha (read on having high electrical volume resistivity), discontinuous water phase, vat Jade Green dye, electrically charged reagent sodium formaldehyde sulfoxylate and surfactant Permulsion FO, $\text{RO}[\text{CH}_2\text{CH}_2\text{O}]_{15}\text{CH}_2\text{CH}_2\text{OH}$, wherein R = mixed palmityl and stearyl (Example 20A). The non-ionic surfactant would not significantly reduce the volume resistivity of the continuous phase. The R substituent of the surfactant is compatible with the continuous phase and the ethylene oxide part is compatible with water.

22. Claims 35 is rejected under 35 U.S.C. 102(b) as being anticipated by Sertorio et al. (US 2828180).

Sertorio discloses a water-in-oil dyestuff emulsion comprising continuous phase naphtha (read on having high electrical volume resistivity), discontinuous water phase, vat Jade Green dye and electrically charged reagent sodium formaldehyde sulfoxylate (Example 20A).

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Claim Rejections - 35 USC § 103

23. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

24. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

25. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sertorio et al. (US 2828180).

The disclosure of Sertorio is adequately set forth in paragraph 20 and is incorporated herein by reference.

Sertorio further discloses metal soap aluminum stearate (Example 88A) and aluminum palmitate (Example 87A) in the emulsion. However, Sertorio is silent on using metal soap with other surfactants.

It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.

Claim Rejections - 35 USC § 102/103

26. Claim 34 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Clancy (US 3347702).

Clancy discloses a composition comprising benzene (reads on continuous oil phase having high electrical volume resistivity), water and Triton X-400 (reads on electrically charged surfactant) forming a water-in-oil emulsion (Example 3). The Triton X-400 is stearyl dimethyl benzyl ammonium chloride (read on reactant of acid and base) that has one part that is compatible with the benzene and one part that is compatible with water. Zinc oxide (read on catalyst) is used in the composition of Example 3. Clancy also disclose incorporation of dye in the composition (column 5, line 74 through column 6, line 18). The composition is used for forming electrostatic printing. One would anticipate the surfactant will not significantly reduce the volume resistivity of the continuous phase.

Alternative, Clancy is silent on the selected surfactant will not significantly reduce the volume resistivity of the continuous phase. Since the reference and application use substantially identical surfactant (Triton X-400 in Example 3 vs. Triton X-100 in instant application [0131]) in producing the emulsion, the reference surfactant would have the claimed property. “When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.” In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977).

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun-Cheng Wang whose telephone number is (571)270-5459. The examiner can normally be reached on Monday to Friday w/alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571)272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ling-Siu Choi/
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